

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Spring 2018 Levee Inspection Results

Reclamation District No. 2091 Chase

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
† Overall LMA Rating (Fall Only)				

** Non-receipt of Summer or Winter Inspection
Reports may effect overall annual rating.

† **SPRING INSPECTIONS:** Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Spring 2018 Levee Inspection Results

Reclamation District No. 2091 Chase

Waterway			Bank	Unit Miles
Unit No. 01 San Joaquin River			Right	7.46
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	5/1/2018 - 5/1/2018			
DWR Inspector	Richard Willoughby			
Accompanied By				

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.00	Rating **	A	Issue No.	2
LM End	0.00	Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals				
DWR ID	DWR_RD2091_01_s _ 2013_2				
Comment Code					
Inspector Comment					
The LMA has copy of O & M manual on file at district office.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	4
LM End	0.00	Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Emergency Supplies & Equipment				
DWR ID	DWR_RD2091_01_s _ 2013_4				
Comment Code					
Inspector Comment					
The LMA maintains adequate flood fight supplies and equipment.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	5
LM End	0.00	Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Flood Preparedness & Training				
DWR ID	DWR_RD2091_01_s _ 2013_5				
Comment Code					
Inspector Comment					
The LMA maintains a good working knowledge of flood response activities and has been involved in flood fight training.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.00	Rating **	M	Issue No.	19
LM End	7.45	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			37.541456 °	37.478927 °
				-121.092793 °	-121.044666 °
DWR ID	DWR_RD2091_01_s_2018_19				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					

No Photos

LM Start	0.00	Rating **	M	Issue No.	27
LM End	7.45	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			37.541456 °	37.478927 °
				-121.092793 °	-121.044666 °
DWR ID	DWR_RD2091_01_s_2018_27				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.08	Rating **	M	Issue No.	45
LM End	0.08	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			37.541970 °	37.541970 °
				-121.093980 °	-121.093980 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:43207 DS_ID:23155 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears abandoned and if so should be done so properly. FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal drainage pipe through the levee, 7.2 feet below the crown. Slide gate in a 36-inch corrugated metal pipe (CMP) riser on the waterside (WS) slope. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 0.07), Drawing No. 07-04-1555, Sheets 1555/17 and 1555/55, (Station 906+85)]. FS Date: 1/29/2015 2:26:31 PM					

Photo 1 of 3 : UCIP_SP_2018_43207_38148.jpg



Slide gate in 36-inch CMP riser on WS toe.

LM Start	0.08	Rating **	M	Issue No.	45 (cont)
LM End	0.08	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP_SP_2018_43207_38147.jpg



Slide gate in 36-inch CMP riser on WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.08	Rating **	M	Issue No.	45 (cont)	
LM End	0.08	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			37.541970 °	37.541970 °	
				-121.093980 °	-121.093980 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:43207 DS_ID:23155 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears abandoned and if so should be done so properly. FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal drainage pipe through the levee, 7.2 feet below the crown. Slide gate in a 36-inch corrugated metal pipe (CMP) riser on the waterside (WS) slope. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 0.07), Drawing No. 07-04-1555, Sheets 1555/17 and 1555/55, (Station 906+85)]. FS Date: 1/29/2015 2:26:31 PM						

Photo 3 of 3 : UCIP_SP_2018_43207_38146.jpg



CMP stormdrain at outlet off WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.10	Rating **	U	Issue No.	46	
LM End	0.10	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			37.542030 °	37.542030 °	
				-121.094370 °	-121.094370 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:51387 DS_ID:23156 EP_NO: N/A Repair Type: Urgent Crossing Status: Found UCIP Comments: 11/18/2016 Same as last inspection this is a non-functional crossing with no visible inlet on LS or outlet on WS. The only appurtenance found at this location is a CMP riser with a missing cover located on the WS. This crossing remains Urgent since the pipe on the WS may still be opened. According to Mike Alves, this crossing is abandoned and the City of Modesto is working with CVFPB to authorize proper abandonment/removal. The City is working at finding funds to pay for proper abandonment/removal of all the drainage structures through this levee. (O. Magana - DWR UCIP)01/29/2015 Pipe open on WS and slide gate has been removed. Appears abandoned and should be done so properly. (M. Alves - City of Modesto) FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal drainage pipe through the levee, 9 feet below the crown. Slide gate in a corrugated metal pipe (CMP) riser located on the waterside (WS) slope. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 0.10), Drawing No. 07-04-1555, Sheets 1555/17 and 1555/55, (Station 907+55)]. FS Date: 11/18/2016						

LM Start	0.10	Rating **	U	Issue No.	46 (cont)
LM End	0.10	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_SP_2018_51387_38150.jpg



36-inch CMP riser on WS slope.

Photo 2 of 3 : UCIP_SP_2018_51387_38149.jpg



Slide gate missing from open end of pipe at WS slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.10	Rating **	U	Issue No.	46 (cont)	
LM End	0.10	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			37.542030 °	37.542030 °	
				-121.094370 °	-121.094370 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:51387 DS_ID:23156 EP_NO: N/A Repair Type: Urgent Crossing Status: Found UCIP Comments: 11/18/2016 Same as last inspection this is a non-functional crossing with no visible inlet on LS or outlet on WS. The only appurtenance found at this location is a CMP riser with a missing cover located on the WS. This crossing remains Urgent since the pipe on the WS may still be opened. According to Mike Alves, this crossing is abandoned and the City of Modesto is working with CVFPB to authorize proper abandonment/removal. The City is working at finding funds to pay for proper abandonment/removal of all the drainage structures through this levee. (O. Magana - DWR UCIP)01/29/2015 Pipe open on WS and slide gate has been removed. Appears abandoned and should be done so properly. (M. Alves - City of Modesto) FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal drainage pipe through the levee, 9 feet below the crown. Slide gate in a corrugated metal pipe (CMP) riser located on the waterside (WS) slope. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 0.10), Drawing No. 07-04-1555, Sheets 1555/17 and 1555/55, (Station 907+55)]. FS Date: 11/18/2016						

Photo 3 of 3 : UCIP_SP_2018_51387_76669.jpg



Overview of levee crown at pipe crossing.

LM Start	0.23	Rating **	M	Issue No.	15
LM End	0.23	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			37.541550 °	37.541550 °
				-121.096742 °	-121.096742 °
DWR ID	DWR_RD2091_01_s_2016_15				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
Caving on landward shoulder possible collapsed pipe. Caving is 34 feet long over one inch depth.					

Photo 1 of 2 : SP_2018_RD2091_318_15_20180307_00015.jpg



Looking southwest at the dip on the landside shoulder.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.23	Rating **	M	Issue No.	15 (cont)	
LM End	0.23	Issue Type +	Ma	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Erosion / Bank Caving			37.541550 °	37.541550 °	
				-121.096742 °	-121.096742 °	
DWR ID	DWR_RD2091_01_s_2016_15					
Comment Code						
E1 : Note and monitor erosion site.						
Inspector Comment						
Caving on landward shoulder possible collapsed pipe. Caving is 34 feet long over one inch depth.						

Photo 2 of 2 : SP_2018_RD2091_318_15_20180307_00016.jpg



Looking northeast at the dip in the landside shoulder.

LM Start	0.24	Rating **	U	Issue No.	47
LM End	0.24	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			37.541564 °	37.541564 °
				-121.096792 °	-121.096792 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:51388 DS_ID:23158 EP_NO: N/A Repair Type: Urgent Crossing Status: Found UCIP Comments: 11/18/2016 Same as last inspection. This crossing remains Urgent due to the flap gate still missing from the WS toe. According to Mike A. this crossing is an abandoned line and the City of Modesto is working with CVFPB to authorize proper abandonment/removal. The City is working at finding funds to pay for proper abandonment/removal of all the drainage structures through this levee. (O. Magana - DWR UCIP)01/29/2015 Flap gate has fallen off at WS toe. Appears abandoned and if so should be done so properly. (M. Alves - City of Modesto) FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal drainage pipe through the levee, 10 feet below the crown. Flap gate on the waterside (WS) end. Drain opening is located approximately 15 feet off the landside (LS) toe. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 0.23), Drawing No. 07-04-1555, Sheets 1555/17 and 1555/55, (Station 915+00)]. FS Date: 11/18/2016					

Photo 1 of 3 : UCIP_SP_2018_51388_38156.jpg



Pipe visible in canal on WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Reclamation District No. 2091 Chase

LM Start	0.25	Rating **	M	Issue No.	16 (cont)
LM End	0.28	Issue Type +	Ma	Location *	LS



Looking northwest at rill erosion on landside slope.



Looking east at rill erosion above rodent hole on landward slope. (Spring 2017)

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.63	Rating **	M	Issue No.	48
LM End	0.63	Issue Type +	Ma	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP LMA Responsibility		37.541220 °	37.541220 °	
			-121.103880 °	-121.103880 °	
DWR ID					

Comment Code

Inspector Comment

FS_ID:51639
DS_ID:23161
EP_NO: N/A
Repair Type: Non-Urgent
Crossing Status: Found
UCIP Comments: 11/18/2016 Crossing has been downgraded from Urgent to Non-Urgent since the flap gate appears to fully close. According to Mike Alvez, this crossing is abandoned and the City of Modesto is working with CVFPB to authorize proper abandonment/removal. The City is working at finding funds to pay for proper abandonment/removal of all the drainage structures through this levee. (O. Magana - DWR UCIP)01/29/2015 Appears abandoned and if so should be done so properly. (M. Alvez - City of Modesto)
FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal drainage pipe through the levee, 12 feet below the crown. Flap gate and concrete headwall on the waterside (WS) end. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 0.64)].
FS Date: 11/18/2016

LM Start	0.63	Rating **	M	Issue No.	48 (cont)
LM End	0.63	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_SP_2018_51639_38158.jpg



24-inch CMP on concrete headwall with flapgate on WS toe.

Photo 2 of 3 : UCIP_SP_2018_51639_38157.jpg



24-inch CMP on concrete headwall with flapgate on WS toe.

* Location	** Rating	+ Issue Type
LS : Land Side WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
N/A : Not Applicable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.63	Rating **	M	Issue No.	48 (cont)	
LM End	0.63	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			37.541220 °	37.541220 °	
				-121.103880 °	-121.103880 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:51639 DS_ID:23161 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 11/18/2016 Crossing has been downgraded from Urgent to Non-Urgent since the flap gate appears to fully close. According to Mike Alvez, this crossing is abandoned and the City of Modesto is working with CVFPB to authorize proper abandonment/removal. The City is working at finding funds to pay for proper abandonment/removal of all the drainage structures through this levee. (O. Magana - DWR UCIP)01/29/2015 Appears abandoned and if so should be done so properly. (M. Alvez - City of Modesto) FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal drainage pipe through the levee, 12 feet below the crown. Flap gate and concrete headwall on the waterside (WS) end. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 0.64)]. FS Date: 11/18/2016						

Photo 3 of 3 : UCIP_SP_2018_51639_76677.jpg



View of LS.

LM Start	0.94	Rating **	A/W	Issue No.	14
LM End	6.84	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 Storm Damage			37.537775 °	37.482295 °
				-121.106730 °	-121.051592 °
DWR ID	DWR_RD2091_01_f _ 2017_14				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:Wave wash damage/erosion of 2 miles ... see attached description and photos					
Site ID No:471					
Site Designation:LMA-298					
Repair Type: Erosion					
Rating:Area of Concern					
Field Date:7/20/2017					
Notes: Low priority because wavewash scarps are less than 1 ft and do not cut into prisim significantly and can be repaired by district through O&M. There is also a large berm here. Wavewash is present on both LS and WS					

Photo 1 of 3 : LEVAL_SP_2018_471_2337.jpg



* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.94	Rating **	A/W	Issue No.	14 (cont)	
LM End	6.84	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	2017 Storm Damage			37.537775 °	37.482295 °	
				-121.106730 °	-121.051592 °	
DWR ID	DWR_RD2091_01_f _ 2017_14					
Comment Code						
Inspector Comment						
Levee Evaluation Comments						
Description:Wave wash damage/erosion of 2 miles ... see attached description and photos						
Site ID No:471						
Site Designation:LMA-298						
Repair Type: Erosion						
Rating:Area of Concern						
Field Date:7/20/2017						
Notes: Low priority because wavewash scarps are less than 1 ft and do not cut into prisms significantly and can be repaired by district through O&M. There is also a large berm here. Wavewash is present on both LS and WS.						

LM Start	0.94	Rating **	A/W	Issue No.	14 (cont)
LM End	6.84	Issue Type +	Ma	Location *	

A photograph showing two people standing on the crest of a large sand dune. Two white SUVs are parked on the dune behind them. The foreground is filled with green, leafy vegetation. The sky is clear and blue.

* Location	** Rating	+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	1.41	Rating **	A/W	Issue No.	11
LM End	1.43	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			37.531243 °	37.530896 °
				-121.106716 °	-121.106737 °
DWR ID	DWR_RD2091_01_f_2017_11				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					
Minor erosion on waterside toe.					

Photo 1 of 1 : SP_2018_RD2091_318_11_20180307_00007.jpg



Looking south at erosion on waterside slope.

LM Start	1.41	Rating **	A/W	Issue No.	24
LM End	1.44	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 Storm Damage			37.531170 °	37.530760 °
				-121.106750 °	-121.106710 °
DWR ID	DWR_RD2091_01_f_2017_24				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:132					
Site Designation:DWR_RD2091_01_R_2012_01					
Repair Type: Erosion					
Rating:Area of Concern					
Field Date:6/7/2017					
Notes: Wavewash erosion up to 12" deep at high water mark.					

Photo 1 of 3 : LEVAL_SP_2018_132_1181.jpg



* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	1.41	Rating **	A/W	Issue No.	24 (cont)	
LM End	1.44	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	2017 Storm Damage			37.531170 °	37.530760 °	
				-121.106750 °	-121.106710 °	
DWR ID	DWR_RD2091_01_f_2017_24					
Comment Code						
Inspector Comment						
Levee Evaluation Comments						
Description:						
Site ID No:132						
Site Designation:DWR_RD2091_01_R_2012_01						
Repair Type: Erosion						
Rating:Area of Concern						
Field Date:6/7/2017						
Notes: Wavewash erosion up to 12" deep at high water mark.						

LM Start	1.41	Rating **	A/W	Issue No.	24 (cont)
LM End	1.44	Issue Type +	Ma	Location *	

Photo 2 of 3 : LEVAL_SP_2018_132_1182.jpg



Photo 3 of 3 : LEVAL_SP_2018_132_1187.jpg



* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	2.00	Rating **	A/W	Issue No.	17
LM End	2.03	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			37.526646 °	37.526259 °
				-121.099810 °	-121.099464 °
DWR ID	DWR_RD2091_01_f_2017_17				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comment					

Photo 1 of 1 : SP_2018_RD2091_318_17_20180307_00019.jpg



Looking southeast at the landside slope.

LM Start	2.05	Rating **	M	Issue No.	18
LM End	2.06	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			37.526083 °	37.525897 °
				-121.099328 °	-121.099116 °
DWR ID	DWR_RD2091_01_f_2017_18				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					
Erosion at the landside toe.					

Photo 1 of 1 : SP_2018_RD2091_318_18_20180307_00020.jpg



Looking southeast at erosion on the toe of the landside slope.

* Location		** Rating		+ Issue Type	
LS : Land Side	N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement	

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	2.15	Rating **	A/W	Issue No.	25
LM End	2.15	Issue Type +	Ob	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	2017 Storm Damage		37.525220 °	37.525220 °	
			-121.097700 °	-121.097700 °	
DWR ID	DWR_RD2091_01_f_2017_25				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:124					
Site Designation:199-1					
Repair Type: Seepage					
Rating:					
Field Date:					
Notes:					

No Photos

LM Start	2.41	Rating **	A/W	Issue No.	26
LM End	2.49	Issue Type +	Ob	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	2017 Storm Damage		37.522090 °	37.521140 °	
			-121.095580 °	-121.095080 °	
DWR ID	DWR_RD2091_01_s_2018_26				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:125					
Site Designation:DWR_RD2091_01_R_2012_05					
Repair Type: Seepage					
Rating:					
Field Date:					
Notes:					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	2.61	Rating **	A/W	Issue No.	20
LM End	2.64	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			37.520108 °	37.520027 °
				-121.093147 °	-121.092767 °
DWR ID	DWR_RD2091_01_s _ 2017_20				
Comment Code					
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.					
Inspector Comment					

No Photos

LM Start	2.84	Rating **	A/W	Issue No.	38	
LM End	3.46	Issue Type +	Ob	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	2017 Storm Damage			37.519210 °	37.511720 °	
				-121.089010 °	-121.087380 °	
DWR ID	DWR_RD2091_01_s _ 2018_38					
Comment Code						
Inspector Comment						
Levee Evaluation Comments						
Description:						
Site ID No:128						
Site Designation:199-105						
Repair Type: Seepage						
Rating:						
Field Date:						
Notes:						

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	3.90	Rating **	C	Issue No.	21
LM End	3.90	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			37.506902 °	37.506902 °
				-121.082771 °	-121.082771 °
DWR ID	DWR_RD2091_01_s_2017_21				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					
Sinkhole at landward side toe					

No Photos

LM Start	3.91	Rating **	M	Issue No.	30
LM End	3.95	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			37.506753 °	37.506251 °
				-121.082748 °	-121.082606 °
DWR ID	DWR_RD2091_01_f_2017_30				
Comment Code					
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.					
Inspector Comment					

Photo 1 of 1 : SP_2018_RD2091_318_30_20180307_00030.jpg



Looking south at landside slope.

LM Start	4.25	Rating **	M	Issue No.	22
LM End	4.25	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			37.501907 °	37.501907 °
				-121.082123 °	-121.082123 °
DWR ID	DWR_RD2091_01_s_2017_22				
Comment Code					
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.					
Inspector Comment					

Photo 1 of 1 : SP_2018_RD2091_318_22_20180307_00023.jpg



Looking south at rodent activity on landward shoulder and slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	4.44	Rating **	A/W	Issue No.	39
LM End	4.54	Issue Type +	Ob	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	2017 Storm Damage		37.499440 °	37.498040 °	
			-121.080720 °	-121.080720 °	
DWR ID	DWR_RD2091_01_s_2018_39				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:131					
Site Designation:DWR_RD2091_01_R_2012_02					
Repair Type: Seepage					
Rating:					
Field Date:					
Notes:					

No Photos

LM Start	4.57	Rating **	A/W	Issue No.	40
LM End	5.00	Issue Type +	Ob	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	2017 Storm Damage		37.497780 °	37.492630 °	
			-121.080340 °	-121.076070 °	
DWR ID	DWR_RD2091_01_s_2018_40				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:130					
Site Designation:199-100					
Repair Type: Seepage					
Rating:					
Field Date:					
Notes:					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	4.59	Rating **	M	Issue No.	49
LM End	4.59	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			37.497390 °	37.497390 °
				-121.080370 °	-121.080370 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:43209 DS_ID:23165 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears abandoned and if so should be done so properly. FIELD_STRUCT_DESC: 36-inch corrugated metal irrigation pipe through the levee, 15 feet below the crown. Abandoned concrete inlet box on the waterside (WS) slope of the levee. 6-foot by 5-foot concrete distribution box at the landside (LS) toe. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 4.67), 30-inch pipe listed]. FS Date: 1/29/2015 2:27:42 PM					

Photo 1 of 3 : UCIP_SP_2018_43209_38211.jpg



Distribution box on LS toe.

LM Start	4.59	Rating **	M	Issue No.	49 (cont)
LM End	4.59	Issue Type +	En	Location *	

Photo 2 of 3 : UCIP_SP_2018_43209_38210.jpg



Open CMP pipe through levee at distribution box on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	4.59	Rating **	M	Issue No.	49 (cont)
LM End	4.59	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			37.497390 °	37.497390 °
				-121.080370 °	-121.080370 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:43209 DS_ID:23165 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears abandoned and if so should be done so properly. FIELD_STRUCT_DESC: 36-inch corrugated metal irrigation pipe through the levee, 15 feet below the crown. Abandoned concrete inlet box on the waterside (WS) slope of the levee. 6-foot by 5-foot concrete distribution box at the landside (LS) toe. [Additional Reference(s): DWR Levee Log, 1992. USACE San Joaquin O&M Manual 6, September 1961, (HLM 4.67), 30-inch pipe listed]. FS Date: 1/29/2015 2:27:42 PM					

Photo 3 of 3 : UCIP_SP_2018_43209_38209.jpg



Abandoned concrete box on WS slope.

LM Start	4.83	Rating **	A/W	Issue No.	34
LM End	4.83	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			37.494396 °	37.494396 °
				-121.078306 °	-121.078306 °
DWR ID	DWR_RD2091_01_f_2017_34				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	4.83	Rating **	A/W	Issue No.	41
LM End	4.83	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 Storm Damage			37.494300 °	37.494300 °
				-121.078300 °	-121.078300 °
DWR ID	DWR_RD2091_01_f_2017_41				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:117					
Site Designation:LMA-37					
Repair Type: Erosion					
Rating:Area of Concern					
Field Date:6/7/2017					
Notes: Very minor erosion at toe of levee. Depth of erosion is 3" max.					

LM Start	4.83	Rating **	A/W	Issue No.	41 (cont)
LM End	4.83	Issue Type +	Ma	Location *	

Photo 1 of 3 : LEVAL_SP_2018_117_325.jpg



Photo 2 of 3 : LEVAL_SP_2018_117_854.jpg



* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	4.83	Rating **	A/W	Issue No.	41 (cont)	
LM End	4.83	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	2017 Storm Damage			37.494300 °	37.494300 °	
				-121.078300 °	-121.078300 °	
DWR ID	DWR_RD2091_01_f_2017_41					
Comment Code						
Inspector Comment						
Levee Evaluation Comments						
Description:						
Site ID No:117						
Site Designation:LMA-37						
Repair Type: Erosion						
Rating:Area of Concern						
Field Date:6/7/2017						
Notes: Very minor erosion at toe of levee. Depth of erosion is 3" max.						

Photo 3 of 3 : LEVAL_SP_2018_117_855.jpg



LM Start	4.84	Rating **	U	Issue No.	10
LM End	4.85	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			37.494297 °	37.494115 °
				-121.078233 °	-121.078100 °
DWR ID	DWR_RD2091_01_f_2016_10				
Comment Code					
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.					
Inspector Comment					
Several large rodent holes on landward slope.					

Photo 1 of 4 : SP_2018_RD2091_318_10_20180307_00003.jpg



Looking southeast at landside slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	4.84	Rating **	U	Issue No.	10 (cont)	
LM End	4.85	Issue Type +	Ma	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Animal Control			37.494297 °		37.494115 °
				-121.078233 °		-121.078100 °
DWR ID	DWR_RD2091_01_f_2016_10					
Comment Code						
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.						
Inspector Comment						
Several large rodent holes on landward slope.						

LM Start	4.84	Rating **	U	Issue No.	10 (cont)
LM End	4.85	Issue Type +	Ma	Location *	LS

Photo 2 of 4 : SP_2018_RD2091_318_10_20180307_00004.jpg



Looking south at several rodent holes on landward slope.

Photo 3 of 4 : SP_2018_RD2091_318_10_20180307_00005.jpg



Looking south at close-up view of rodent holes on landward slope.

LM Start	4.84	Rating **	U	Issue No.	10 (cont)
LM End	4.85	Issue Type +	Ma	Location *	LS

Photo 4 of 4 : SP_2018_RD2091_318_10_20180307_00006.jpg



Looking west at close-up view of rodent holes on landward slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	5.20	Rating **	A/W	Issue No.	13
LM End	5.20	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			37.490756 °	37.490756 °
				-121.073410 °	-121.073410 °
DWR ID	DWR_RD2091_01_f_2016_13				
Comment Code					
S3 : Repair the levee slope damaged by vehicle traffic and prevent access where possible.					
Inspector Comment					
Vehicle traffic damaging slope on landward slope.					

Photo 1 of 2 : SP_2018_RD2091_318_13_20180307_00010.jpg



Looking southeast at the landside slope.

LM Start	5.20	Rating **	A/W	Issue No.	13 (cont)
LM End	5.20	Issue Type +	Ma	Location *	LS

Photo 2 of 2 : SP_2018_RD2091_318_13_20180307_00011.jpg



Looking at damage on landside slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	5.60	Rating **	A/W	Issue No.	42
LM End	5.65	Issue Type +	Ob	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	2017 Storm Damage		37.486820 °	37.486220 °	
			-121.068100 °	-121.067530 °	
DWR ID	DWR_RD2091_01_s_2018_42				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:129					
Site Designation:199-101					
Repair Type: Seepage					
Rating:					
Field Date:					
Notes:					

No Photos

LM Start	5.66	Rating **	M	Issue No.	28
LM End	5.66	Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Trim / Thin Trees		37.486101 °	37.486101 °	
			-121.067620 °	-121.067620 °	
DWR ID	DWR_RD2091_01_s_2018_28				
Comment Code					
T1 : Trim trees to at least five feet above ground level.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	5.81	Rating **	M	Issue No.	29
LM End	5.81	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			37.485553 °	37.485553 °
				-121.065280 °	-121.065280 °
DWR ID	DWR_RD2091_01_s_2018_29				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					

No Photos

LM Start	5.92	Rating **	M	Issue No.	12
LM End	5.92	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			37.485998 °	37.485998 °
				-121.063323 °	-121.063323 °
DWR ID	DWR_RD2091_01_f_2015_12				
Comment Code					
T1 : Trim trees to at least five feet above ground level.					
Inspector Comment					

Photo 1 of 1 : SP_2018_RD2091_318_12_20180503_00050.jpg



Looking southeast at untrimmed tree at landward toe. (Spring 2018)

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	5.99	Rating **	A/W	Issue No.	43	
LM End	5.99	Issue Type +	Ob	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	2017 Storm Damage			37.486490 °		37.486490 °
				-121.062270 °		-121.062270 °
DWR ID	DWR_RD2091_01_f_2017_43					
Comment Code						
Inspector Comment						
Levee Evaluation Comments						
Description:						
Site ID No:127						
Site Designation:199-4						
Repair Type: Seepage						
Rating:						
Field Date:						
Notes:						

No Photos

LM Start	6.23	Rating **	M	Issue No.	36
LM End	6.27	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			37.485724 °	37.485234 °
				-121.058443 °	-121.058032 °
DWR ID	DWR_RD2091_01_f_2017_36				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comment					

Photo 1 of 1 : SP_2018_RD2091_318_36_20180307_00031.jpg



Looking southeast at landside slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	6.29	Rating **	A/W	Issue No.	44
LM End	6.75	Issue Type +	Ob	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	2017 Storm Damage		37.485040 °	37.481740 °	
			-121.057680 °	-121.052910 °	
DWR ID	DWR_RD2091_01_s_2018_44				
Comment Code					
Inspector Comment					
Levee Evaluation Comments Description: Site ID No:126 Site Designation:199-106 Repair Type: Seepage Rating: Field Date: Notes:					

No Photos

LM Start	6.87	Rating **	M	Issue No.	37
LM End	6.94	Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		37.482021 °	37.481994 °	
			-121.051260 °	-121.049991 °	
DWR ID	DWR_RD2091_01_f_2017_37				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	7.42	Rating **	U	Issue No.	8
LM End	7.45	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			37.479308 °	37.478998 °
				-121.044708 °	-121.044660 °
DWR ID	DWR_RD2091_01_s_2017_8				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					
Repaired area with concrete containing rebar. Need to remove rebar.					

Photo 1 of 3 : SP_2018_RD2091_318_8_20180307_00001.jpg



Looking northeast at concrete rubble with rebar at landward toe next to canal.

LM Start	7.42	Rating **	U	Issue No.	8 (cont)
LM End	7.45	Issue Type +	Ma	Location *	LS

Photo 2 of 3 : SP_2018_RD2091_318_8_20180307_00002.jpg



Looking east at concrete rubble with rebar at landward toe next to canal.

LM Start	7.42	Rating **	U	Issue No.	8 (cont)
LM End	7.45	Issue Type +	Ma	Location *	LS

Photo 3 of 3 : SP_2018_RD2091_318_8_20180503_00051.jpg



Looking east at repaired site on waterward slope and toe. (Spring 2018)

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain			

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	7.45	Rating **	A/W	Issue No.	23
LM End	7.45	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 Storm Damage			37.479000 °	37.479000 °
				-121.044000 °	-121.040000 °
DWR ID	DWR_RD2091_01 f _ 2017_23				

Comment Code

Inspector Comment

Levee Evaluation Comments
Description: Sloughing at Mile 7.59 of the San Joaquin River
Site ID No: 473
Site Designation: LMA-300
Repair Type: Erosion
Rating: Area of Concern
Field Date: 7/20/2017
Notes: Concrete rubble was installed here during the storms after noticing cracks and sloughing. It has rebar sticking out and needs to be replaced with clean rip rap. Responsibility is grey here because TID maintains channel and placed concrete during storm.

LM Start	7.45	Rating **	A/W	Issue No.	23 (cont)
LM End	7.45	Issue Type +	Ma	Location *	

Photo 1 of 3 : LEVAL_SP_2018_473_2326.jpg



Photo 2 of 3 : LEVAL_SP_2018_473_2330.jpg



* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Right	7.46	05/01/2018 05/01/2018	Richard Willoughby

LM Start	7.45	Rating **	A/W	Issue No.	23 (cont)	
LM End	7.45	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	2017 Storm Damage			37.479000 °	37.479000 °	
				-121.044000 °	-121.044000 °	
DWR ID	DWR_RD2091_01_f_2017_23					
Comment Code						
Inspector Comment						
Levee Evaluation Comments						
Description:Sloughing at Mile 7.59 of the San Joaquin River						
Site ID No:473						
Site Designation:LMA-300						
Repair Type: Erosion						
Rating:Area of Concern						
Field Date:7/20/2017						
Notes: Concrete rubble was installed here during the storms after noticing cracks and sloughing. It has rebar sticking out and needs to be replaced with clean rip rap. Responsibility is grey here because TID maintains channel and placed concrete during storm.						

Photo 3 of 3 : LEVAL_SP_2018_473_2331.jpg



* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Spring 2018 Levee Inspection Results

Reclamation District No. 2091 Chase

Waterway			Bank	Unit Miles
Unit No. 02 San Joaquin River				0.05
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	5/1/2018 - 5/1/2018			
DWR Inspector	Richard Willoughby			
Accompanied By				

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River		0.05	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.02	Rating **	M	Issue No.	1
LM End	0.02	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			37.482450 °	37.482450 °
				-121.051220 °	-121.051220 °
DWR ID					

Comment Code

Inspector Comment

FS_ID:51390
DS_ID:23175
EP_NO: N/A
Repair Type: Non-Urgent
Crossing Status: Found
UCIP Comments: 11/18/2016 Same as last inspection. This is a non-functional crossing with flap gate in the closed position. This crossing has been downgraded from Urgent to Non-Urgent -- no integrity issues were observed on the levee crown or slopes. According to Mike A. this crossing is abandoned and the City of Modesto is working with CVFPB to authorize proper abandonment/removal. The City is working at finding funds to pay for proper abandonment/removal of all the drainage structures through this levee. (O. Magana - DWR UCIP)01/29/2015
Flap gate rusted in-place and does not function. In closed position. (M. Alves - City of Modesto)
FIELD_STRUCT_DESC: 24-inch corrugated metal drainage pipe through the levee, 16.4 feet below the crown. Flap gate on the waterside (WS) toe. [Additional Reference(s): DWR Levee Log, 1992].
FS Date: 11/18/2016

LM Start	0.02	Rating **	M	Issue No.	1 (cont)
LM End	0.02	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP_SP_2018_51390_38216.jpg



24-inch CMP with flapgate visible on WS toe.

Photo 2 of 3 : UCIP_SP_2018_51390_76689.jpg



Overview photo of levee crown at crossing.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Spring 2018

Reclamation District No. 2091 Chase

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River		0.05	05/01/2018 05/01/2018	Richard Willoughby

LM Start	0.02	Rating **	M	Issue No.	1 (cont)	
LM End	0.02	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			37.482450 °	37.482450 °	
				-121.051220 °	-121.051220 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:51390 DS_ID:23175 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 11/18/2016 Same as last inspection. This is a non-functional crossing with flap gate in the closed position. This crossing has been downgraded from Urgent to Non-Urgent -- no integrity issues were observed on the levee crown or slopes. According to Mike A. this crossing is abandoned and the City of Modesto is working with CVFPB to authorize proper abandonment/removal. The City is working at finding funds to pay for proper abandonment/removal of all the drainage structures through this levee. (O. Magana - DWR UCIP)01/29/2015 Flap gate rusted in-place and does not function. In closed position. (M. Alves - City of Modesto) FIELD_STRUCT_DESC: 24-inch corrugated metal drainage pipe through the levee, 16.4 feet below the crown. Flap gate on the waterside (WS) toe. [Additional Reference(s): DWR Levee Log, 1992]. FS Date: 11/18/2016						

Photo 3 of 3 : UCIP_SP_2018_51390_76686.jpg



Overview of levee crown at crossing and at a distance there is a shooting range.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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